

THERMALLY ENHANCED WAFER-LEVEL CHIP SCALE PACKAGE AND METHOD OF FABRICATING THE SAME

ABSTRACT OF THE DISCLOSURE

A thermally-enhanced wafer-level chip scale package (WLCSP) and method of fabricating the same is proposed, which allows easy integration of a thermally-conductive stiffener to each package unit fabricated through the WLCSP technology. The proposed WLCSP technology is characterized by the attachment of a thermally-conductive stiffener to the back side of the semiconductor wafer, which is subsequently cut during the singulation process into separate pieces respectively attached on each of the singulated integrated circuit chips from the semiconductor wafer. The thermally-conductive stiffener not only serves as a heat-dissipation means for each chip during operation, but also serves to reinforce the chip so that the chip can be protected against cracking or chipping during flip-chip die bonding process or during handling and transportation.

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